

of Stammers (l.c.). (Should subsequent experiments prove the correctness of my assumption that this larva is identical with *Cysticercus mirabilis*, the specific name *californicus* will be superseded by *mirabilis*, which has priority.)

Feeding experiments with gulls (*Larus californicus*) have proved it to be the larva of *Hymenolepis californicus*, a parasite of this bird. It has not been possible to infest the shrimp with the larvae of the worm, but the percentage of infested shrimp in different seasons in relation to the abundance of the gulls at those seasons is strong indirect proof of the transfer of parasite from bird to shrimp.

*Acknowledgments.*—It gives me much pleasure to acknowledge my indebtedness to the San Diego Zoological Society and the U. S. Bureau of Animal Industry for the privilege of occupying

rooms in their laboratories and for many courtesies during the prosecution of this research. I am especially indebted to Dr. K. C. Kates of the latter institution for the microphotograph.

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**HELMINTHOLOGY.**—*Helminths from the Republic of Panama: II, A new trematode from the intestine of Philander laniger pallidus Thomas and key to the species of the genus Phaneropsolus Looss, 1899 (Trematoda: Lecithodendriidae).* EDUARDO CABALLERO Y C., Institute of Biology of Mexico, and ROBERT G. GROCOTT, Board of Health Laboratory, Ancon, Canal Zone.

The trematodes described below were collected in August 1950 from the intestine of a woolly opossum. The material consists of 15 specimens, all of which are whole stained mounts fixed without compression.

#### *Phaneropsolus philanderi*, n. sp.

The body in all specimens of the trematode is small, round in form, or shaped like a truncated cone with the anterior portion slightly narrowed and the posterior wide and flat. The flukes measures from 1.077 to 1.096 mm long by 1.096 to 1.172 mm broad. Cuticula 0.004 mm in thickness and in anterior region of ventral surface armed with numerous small, conical spines measuring 0.004 mm long. These spines are less numerous at the testicular level and disappear in the posterior part of the body. Spines very sparse on dorsal surface. Oral sucker is larger than acetabulum, almost spherical or widened transversely, terminally placed, muscular and measures 0.130 to 0.160 mm long by 0.210 to 0.227 mm broad. The spherical acetabulum is situated immediately anterior to the body equator, a little anterior to the reproductive glands and posterior to cirrus pouch at a distance of 0.294 to 0.344 mm from anterior end, and measures 0.134 to

0.168 mm long by 0.126 to 0.152 mm broad. The sucker ratio is 1:1.19 by 1:1.6 to 1:1.29 by 1:1.4.

The mouth is circular or slightly lengthened in transverse diameter and measures from 0.025 to 0.055 mm long and 0.109 to 0.118 mm broad. Prepharynx absent. Pharynx small, muscular, globoid, with transverse diameter greater than the anteroposterior and measures 0.055 to 0.067 mm long by 0.088 to 0.097 mm broad. Esophagus absent. Intestinal ceca short and narrow and extend dorsolaterally to the midtesticular zone.

The large circular genital pore is surrounded by a wide circular band of nucleated cells, measures 0.034 mm in diameter, and is situated slightly to the right of the midline at the level of the posterior border of the pharynx and 0.210 to 0.252 mm from the posterior end of body. The testes are laterally located in the equatorial plane of the parasite; they are spherical or oblong in shape, with smooth contour, size greater than that of ovary and one testis usually being larger than the other; right testis measures 0.134 to 0.185 mm long by 0.168 to 0.206 mm broad, while the left measures 0.168 to 0.273 mm long by 0.181 to 0.218 mm broad. The cirrus pouch is very long, tubular, located in the ventral region in front of the acetabulum and reproductive

glands and extends transversely from the level of the right testis to that of the left and measures 1.050 to 1.092 mm in length and 0.097 to 0.109 mm in breadth. The large seminal vesicle is bipartite, occupies the posterior part of the cirrus pouch, and measures 0.218 to 0.252 mm long by 0.055 to 0.067 mm broad. The pars prostatica occupies the greater part of the cirrus pouch and is composed of numerous cells with alveolated cytoplasm. The cirrus is short, thick, has the form of a truncated cone, and bears abundant tubercles on its surface.

The ovary is also situated in an equatorial position to the right of and posterior to the acetabulum; it is tangent to the right testis, spherical or oblong in shape, of smooth contour, smaller than the testes, and measures 0.113 to 0.155 mm long by 0.151 to 0.185 mm broad. The seminal receptacle is large, oblong, located posterior to the ovary and measures 0.176 to 0.214 mm long by 0.105 to 0.113 mm broad. Mehlis's gland is large, ventrally situated posterior to the acetabulum in the midline almost at the same level as the ovary, and measures from 0.105 to 0.176 mm in length by 0.088 to 0.113 mm in breadth. Laurer's canal present. The uterus fills almost the entire body and extends mainly over the lateral fields from behind the vitellaria to the posterior border of the body. In the central part of the body the uterine loops are sparse and the metraterm passes over to the left of the acetabulum toward the genital pore. The ova are very numerous, smooth-shelled, operculated, yellow, and measure 0.025 to 0.029 mm long by 0.015 to 0.017 mm broad.

The vitellaria occupy the lateral fields in the anterior part of the body, and at the level of the genital pore and cirrus pouch they consist of sparse but large vitelline follicles. The vitelline ducts are narrow and pass obliquely caudad to converge in the zone of Mehlis's gland. The excretory vesicle is V-shaped and occupies all the median and dorsal area in the posterior part of the body. The wide cornua of the vesicle extend to the posterior level of the testes, the right cornu measuring 0.311 to 0.496 mm long by 0.105 to 0.113 mm broad, the left 0.319 to 0.399 mm long by 0.084 to 0.126 mm broad. The excretory pore is subterminal, dorsally placed and surrounded by numerous cells that form a band around it. It is located 0.147 to 0.168 mm from the posterior border of the body.

*Host*.—*Philander laniger pallidus* Thomas.

*Habitat*.—Small intestine.

*Locality*.—Pedro Miguel, Panama Canal Zone.

*Specimens*.—Type specimen in helminthologic collection of the Institute of Biology of Mexico, no. 24-7. Cotype in U. S. National Museum helminthological collection.

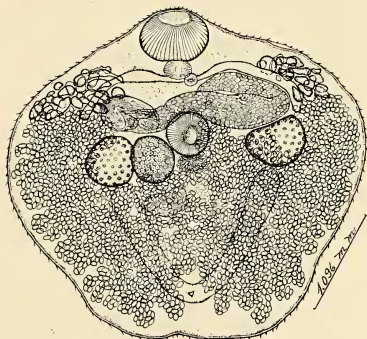


FIG. 1.—*Phaneropsolus philanderi*, n. sp.: Drawing of whole mount, ventral view.

*Discussion*.—At the present time six valid species of the genus *Phaneropsolus* Looss, 1899, are known. *Phaneropsolus micrococcus* (Rudolphi, 1819) Braun, 1901, whose synonym is *Phaneropsolus sigmoideus* Looss, 1899, parasitizes birds in Europe. The following five species parasitize mammals of the order Primates: *Phaneropsolus orbicularis* (Diesing, 1850) Braun, 1901; *Phaner-*



FIG. 2.—*Phaneropsolus philanderi*, n. sp.: Photomicrograph of whole mount, ventral view.

*opsolus oviforme* (Poirier, 1886) Looss, 1889; *Phaneropsolus longipenis* Looss, 1899; *Phaneropsolus lakdivensis* Fernando, 1933; and *Phaneropsolus bonnei* Lie-Kian-Joe, 1951. Since *Phaneropsolus sigmaideus* Looss, 1899, has been considered by Braun to be synonymous with *Phaneropsolus micrococcus* (Rudolphi, 1819) Braun, 1901, there then remains *Phaneropsolus oviforme* (Poirier, 1886) Looss, 1899, as the type species and the one Looss considered to be the second allocated to the new genus proposed by him.

Upon examining the descriptions and drawings of *Ph. oviforme* (Poirier, 1886) Looss, 1889, and *Ph. lakdivensis* Fernando, 1933, we have found that the two species are very similar and must therefore consider *Ph. lakdivensis* as a synonym of *Ph. oviforme* (Poirier, 1886) Looss, 1899. Also in carefully examining descriptions and figures of *Ph. longipenis* Looss, 1899 and those of *Ph. bonnei* Lie-Kian-Joe, 1951 we find that these two species are very similar in size and location of the cirrus pouch but differ in the location of the genital pore and other structures, the differences being great enough to consider them as distinct species.

Through the discovery of *Phaneropsolus philanderi* we have found that there exists no host specificity among the members of this genus since *Ph. micrococcus* (Rudolphi, 1899) Braun, 1901, parasitizes birds, *Passer domesticus* (Linnaeus) of the order Passeriformes, *Caprimulgus europaeus* (Linnaeus) of the order Caprimulgiformes, and *Glareola austriaca* Gmelin = *G. pratincta* (Linnaeus) of the order Charadriiformes; *Ph. philanderi*, n. sp., parasitizes *Philander laniger pallidus* Thomas, a mammal of the order Marsupialia; *Ph. oviforme* (Poirier, 1886) Looss, 1899, lives in Primates of the suborder Lemuroidea such as *Nycticebus javanicus* and *Loris tardigradus*; *Ph. orbicularis* (Diesing, 1850) Braun, 1901, in *Cebus tigrigatus* Humboldt of the order Primates, suborder Anthropeidea; *Ph. longipenis* Looss, 1899, also found in Primates of the suborder Anthropeidea and *Ph. bonnei* Lie-Kian-Joe, 1951, is found in *Homo sapiens* Linnaeus of the suborder Anthropeidea.

*Phaneropsolus philanderi*, n. sp., is similar to *Ph. longipenis* Looss, 1899, as to size of the cirrus pouch, but differs in the transverse position of the cirrus pouch, in the location of the genital pore which is to the left of the posterior border of the pharynx, and in the equatorial position of the reproductive glands. The remaining species of the

genus are distinguished mainly by the large size of the cirrus pouch and in the location of the genital pore and other structures.

#### KEY TO THE SPECIES OF PHANEROPSOLUS

##### I. Cirrus pouch very long.

1. Genital pore median and at level of posterior border of pharynx; cirrus pouch not transverse and testes preequatorial ..... *Ph. longipenis* Looss, 1899
2. Genital pore at level of posterior border of oral sucker; cirrus pouch not transverse and very much coiled; testes equatorial .... *Ph. bonnei* Lie-Kian-Joe, 1951
3. Genital pore dislocated toward left of pharynx; cirrus pouch transverse and testes equatorial .... *Ph. philanderi*, n. sp.

##### II. Cirrus pouch short.

1. Vitellaria arranged in lateral groups at level of intestinal bifurcation.
  - a. Esophagus absent; vitellaria not prececal; ceca not short ..... *Ph. micrococcus* (Rudolphi, 1819) Braun, 1901
  - b. Esophagus absent; vitellaria prececal and ceca short ..... *Ph. orbicularis* (Diesing, 1850) Braun, 1901
2. Vitellaria not arranged in lateral groups at level of intestinal bifurcation ..... *Ph. oviforme* (Poirier, 1886) Looss, 1899

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MAMMALOGY.—A new name for *Dipodomys ordii fuscus* Setzer. HENRY W. SETZER, U. S. National Museum.

It has been called to my attention that the name *Dipodomys ordii fuscus* (Setzer, Univ. Kansas Publ. Mus. Nat. Hist. **1** (23): 555. Dec. 27, 1949) is preoccupied by the name *Dipodomys agilis fuscus* (Boulware, Univ. California Publ. Zool. **46** (7): 393. Sept. 16, 1943). I therefore

propose the name *Dipodomys ordii durranti*, in recognition of Dr. Stephen David Durrant of the University of Utah, to replace the name *Dipodomys ordii fuscus*. I also wish to correct the spelling of the name of the type locality from Juamave to Jaumave, Tamaulipas, Mexico.

## Obituary

ALBERT EUGENE MCPHERSON, a senior materials engineer in the National Bureau of Standards' engineering mechanics laboratory, died on August 5, 1952, at his home near Washington, D. C. Mr. McPherson had been a Bureau employee since 1926. His primary field of research was in the field of aircraft structures and materials. While at the Bureau Mr. McPherson was author of a large number of technical articles published by various technical societies, the National Advisory Committee for Aeronautics, and the National Bureau of Standards. He held patents on two types of accelerometers used in his work.

For many years the National Bureau of Standards has conducted an extensive research program in the field of aeronautics. The program extends from the development of temperature sensing devices for jet engines to the stress analy-

sis of aircraft structures. Mr. McPherson was senior engineer in the Aircraft Structures Group which dealt primarily with the structural strength of basic aircraft components. This included research in the field of dynamic response of simple structures and development of instruments for measuring force acceleration and deformation.

Mr. McPherson was a member of the Washington Academy of Sciences, the Philosophical Society of Washington, the Institute of Aeronautical Sciences, and secretary of the Washington Chapter of the Society for Experimental Stress Analysis.

Mr. McPherson was born in Washington on January 27, 1908. He attended George Washington University and received his degree in mechanical engineering in 1933. He is survived by his wife, a daughter, and his father.